

WHAT IS CLAIMED IS:

1. A self-adhering surface covering comprising:

a substrate;

a pressure-sensitive adhesive layer disposed on the substrate and having an adhesive

5 surface distal from the substrate; and

a barrier layer disposed on the adhesive surface comprising substantially non-adhesive particles having a crush resistance of at least about 10 psi while disposed on the adhesive layer,

wherein the surface covering has substantially no tack at about 10 psi at about 140° F.

10 but has tack at about 20 psi at about 75° F

2. The surface covering as claimed in claim 1, wherein the particles are randomly and substantially uniformly distributed over the surface of the adhesive layer.

3. The surface covering as claimed in claim 1, wherein at least some of the particles are distributed on the adhesive surface in a pattern.

4. The surface covering as claimed in claim 1, wherein the particles have a diameter about equal to or greater than the thickness of the adhesive layer.

5. The surface covering as claimed in claim 1, wherein the particles have a diameter at least greater than the thickness of the adhesive layer.

6. The surface covering as claimed in claim 1, wherein the particles have a diameter between about 2 to about 6 mils.

7. The surface covering as claimed in claim 1, wherein the particles are distributed onto the adhesive surface in an amount between about 0.05 and about 0.2 grams/ft<sup>2</sup> of adhesive surface.

8. The surface covering as claimed in claim 1, wherein the particles are distributed onto the adhesive surface in an amount between about 0.01 and about 0.1 cm<sup>3</sup>/ft<sup>2</sup> of adhesive surface.

9. The surface covering as claimed in claim 1, wherein the particles cover about 1% to about 10% of the adhesive surface of the adhesive layer.

10. The surface covering as claimed in claim 1, wherein the particles cover about 2% of the adhesive surface of the adhesive layer.

11. The surface covering as claimed in claim 1, wherein the particles are collapsible or fragile under conditions employed for pressure-bonding the surface covering to a desired site of bonding.

12. The surface covering as claimed in claim 1, wherein the adhesive layer is capable of supporting a load of up to about 20 psi prior to the particles being crushed.

13. The surface covering as claimed in claim 1, wherein the adhesive layer has a thickness between about 1 and about 2 mils.

14. The surface covering as claimed in claim 1, wherein pressure-sensitive adhesive layer comprises an adhesive selected from natural rubber adhesives, synthetic rubber adhesives, acrylic adhesives, vinyl acetate adhesives, urethane adhesives, and mixtures thereof.

15. The surface covering as claimed in claim 1, wherein the pressure-sensitive adhesive layer comprises an e-beam curable adhesive comprising tridecyl acrylate and acrylic acid.

16. The surface covering as claimed in claim 1, wherein at least some of the particles are partially embedded in the adhesive layer.

17. The surface covering as claimed in claim 1, wherein the particles are capable of substantially resisting crushing upon being subjected to a load of about 60 lb/ft<sup>2</sup> which is dropped a vertical distance of about 1 foot.

18. A self-adhering surface covering comprising:  
a substrate;

a pressure-sensitive adhesive layer disposed on the substrate and having an adhesive surface distal from the substrate, the adhesive layer comprising a substantially non-stringing adhesive; and

a barrier layer disposed on the adhesive surface comprising substantially non-adhesive particles having a crush resistance of at least about 10 psi.

19. The surface covering as claimed in claim 18, wherein the particles are randomly and substantially uniformly distributed over the surface of the adhesive layer.

20. The surface covering as claimed in claim 18, wherein at least some of the particles are distributed on the adhesive surface in a pattern.

21. The surface covering as claimed in claim 18, wherein the particles have a diameter about equal to or greater than the thickness of the adhesive layer.

22. The surface covering as claimed in claim 18, wherein the particles have a diameter at least greater than the thickness of the adhesive layer.

23. The surface covering as claimed in claim 18, wherein the particles have a diameter between about 2 to about 6 mils.

24. The surface covering as claimed in claim 18, wherein the particles are distributed onto the adhesive surface in an amount between about 0.05 and about 0.2 grams/ft<sup>2</sup> of adhesive surface.

25. The surface covering as claimed in claim 18, wherein the particles are distributed onto the adhesive surface in an amount between about 0.01 and about 0.1 cm<sup>3</sup>/ft<sup>2</sup> of adhesive surface.

26. The surface covering as claimed in claim 18, wherein the particles cover about 1% to about 10% of the adhesive surface of the adhesive layer.

27. The surface covering as claimed in claim 18, wherein the particles cover about 2% of the adhesive surface of the adhesive layer.

28. The surface covering as claimed in claim 18, wherein the particles are collapsible or fragile under conditions employed for pressure-bonding the surface covering to a desired site of bonding.

29. The surface covering as claimed in claim 18, wherein the adhesive layer is capable of supporting a load of up to about 20 psi prior to the particles being crushed.

30. The surface covering as claimed in claim 18, wherein the adhesive layer has a thickness between about 1 and about 2 mils.

31. The surface covering as claimed in claim 18, wherein pressure-sensitive adhesive layer is comprises an adhesive selected from natural rubber adhesives, synthetic rubber adhesives, acrylic adhesives, vinyl acetate adhesives, urethane adhesives, and mixtures thereof.

32. The surface covering as claimed in claim 18, wherein the pressure-sensitive adhesive layer comprises an e-beam curable adhesive comprising tridecyl acrylate and acrylic acid.

33. The surface covering as claimed in claim 18, wherein at least some of the particles are partially embedded in the adhesive layer.

34. The surface covering as claimed in claim 18, wherein the particles are capable of substantially resisting crushing upon being subjected to a load of about 60 lb/ft<sup>2</sup> which is dropped a vertical distance of about 1 foot.

35. A method of manufacturing a self-adhering surface covering comprising the steps of:

applying an adhesive to a substrate to form an adhesive layer having an adhesive surface; and

5 applying a barrier layer comprising substantially non-adhesive particles to the adhesive surface to form the surface covering, wherein the particles have a crush resistance of at least about 10 psi while disposed on the adhesive layer.

36. The method as claimed in claim 35, wherein the particles are crushable when subjected to a load of about 20 psi while disposed on the adhesive layer.

37. The method as claimed in claim 35, wherein the surface covering has substantially no tack at about 10 psi at about 140° F. but has tack at about 20 psi at about 75° F.

38. The method as claimed in claim 35, wherein the adhesive layer comprises a substantially non-stringing adhesive.

39. The method as claimed in claim 35, wherein the particles are randomly and substantially uniformly distributed over the surface of the adhesive layer.

40. The method as claimed in claim 35, wherein at least some of the particles are distributed in a substantially uniform pattern or design on the adhesive surface.

41. The method as claimed in claim 35, wherein the particles have a diameter about equal to or greater than the thickness of the adhesive layer.

42. The method as claimed in claim 35, wherein the particles have a diameter at least greater than the thickness of the adhesive layer.

43. The method as claimed in claim 35, wherein the particles have a diameter between about 2 to about 6 mils.

44. The method as claimed in claim 35, wherein the particles are distributed onto the adhesive surface in an amount between about 0.05 and about 0.2 grams/ft<sup>2</sup> of adhesive surface.

45. The method as claimed in claim 35, wherein the particles are distributed onto the adhesive surface in an amount between about 0.01 and about 0.1 cm<sup>3</sup>/ft<sup>2</sup> of adhesive surface.

46. The method as claimed in claim 35, wherein the particles cover about 1% to about 10% of the adhesive surface of the adhesive layer.

47. The method as claimed in claim 35, wherein the particles cover about 2% of the adhesive surface of the adhesive layer.

48. The method as claimed in claim 35, wherein the particles are collapsible or fragile under conditions employed for pressure-bonding the surface covering to a desired site of bonding.

49. The method as claimed in claim 35, wherein the adhesive layer is capable of supporting a load of up to about 20 psi prior to the particles being embedded below the adhesive surface.

50. The method as claimed in claim 35, wherein the adhesive layer has a thickness between about 1 and about 2 mils.

51. The method as claimed in claim 35, wherein pressure-sensitive adhesive layer is comprises an adhesive selected from natural rubber adhesives, synthetic rubber adhesives, acrylic adhesives, vinyl acetate adhesives, urethane adhesives, and mixtures thereof.

52. The surface covering as claimed in claim 18, wherein the pressure-sensitive adhesive layer comprises an e-beam curable adhesive comprising tridecyl acrylate and acrylic acid.

53. The method as claimed in claim 35, wherein at least some of the particles are partially embedded in the adhesive layer.

54. The method as claimed in claim 35, wherein the particles are capable of substantially resisting crushing upon being subjected to a load of about 60 lb/ft<sup>2</sup> which is dropped a vertical distance of about 1 foot.

Adhesive  
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